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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,512	07/01/2003	Robert L. Muller JR.	22526	4448

535 7590 03/15/2004

THE FIRM OF KARL F ROSS  
5676 RIVERDALE AVENUE  
PO BOX 900  
RIVERDALE (BRONX), NY 10471-0900

EXAMINER

ZERR, JOHN W

ART UNIT	PAPER NUMBER
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3644

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/611,512	<b>Applicant(s)</b> MULLER, ROBERT L.	
	<b>Examiner</b> John W. Zerr	<b>Art Unit</b> 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/1/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: on page 5 line 27 “two” should be replaced with ---four--- and “10” should be deleted.

Appropriate correction is required.

2. The use of several trademarks has been noted in this application. They should be capitalized wherever they appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

### ***Claim Objections***

3. Claim 10 is objected to because of the following informalities: in line 2 “compressed” should be replaced with ---comprised---. Appropriate correction is required.
4. Claim 19 is objected to because of the following informalities: in line 1 “9” should be replaced with ---18---. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2, 9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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7. Regarding claims 2, 9 and 12, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 5, 9, 10 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Chediak (USPT 5,824,940, cited by Applicant).

Regarding Claim 1 Chediak discloses a projectile destroying layer (16) having a woven ballistic fabric with yarn crossovers and disks (18) having a metal backing (column 4 lines 20-23) such that metal disks are formed. The disks (18) are traversed by the yarns at the crossovers. Another layer (14'') contains ballistic fibers capable of trapping projectile fragments behind the projectile destroying layer (16) (see Figures 2-11 and column 2 line 58-column 4 line 58).

Regarding Claim 2 Chediak discloses that the yarn is made from a high tensile strength fiber that comprises aramid.

Regarding Claim 5 Chediak discloses a plurality of projectile destroying layers (16, 16', 16'') and a plurality of trapping layers (14', 14'', 14''') in a ballistic fabric shell (10) forming body armor.

Regarding Claim 9 Chediak discloses that the ballistic fiber (14) is composed of high tensile strength aramid fiber.

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Regarding Claim 10 Chediak discloses a projectile destroying layer (16) for use in an armor and comprised of a woven ballistic fabric with yarn crossovers and disks (18) having a metal backing (column 4 lines 20-23) such that metal disks are formed anchored at at least some of the crossovers. The metal disks are considered to be capable of tearing apart a projectile entering the layer (16) (see Figures 2-11 and column 2 line 58-column 4 line 58).

Regarding Claims 16 and 17 Chediak discloses a plurality of projectile destroying layers (16). Specifically, three layers are shown.

Regarding Claim 18 Chediak discloses at least one projectile-damaging layer (16) in armor. The layer comprises a fabric having beads (18) with edges positioned to engage the flanks of an oncoming projectile and capable of shredding the projectile while the fabric is capable of capturing the fragments of the shredded projectile (see Figures 2-11 and column 2 line 58-column 4 line 58).

Regarding Claim 19 Chediak discloses that the beads (18) are disks.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chediak.

Regarding Claim 3 Chediak teaches the armor as claimed except Chediak does not teach that the yarn has a diameter or denier between 19 and 1500 dtex. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the yarn in the armor

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of Chediak with a denier or diameter between 19 and 1500 dtex since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding Claim 4 Chediak teaches the armor as claimed except Chediak does not teach that the fabric has a yarn density of 5 threads to 100 threads per inch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the fabric in the armor of Chediak with a yarn density of 5 threads to 100 threads per inch since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

12. Claims 6-8 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chediak in view of Granqvist (USPT 5,903,920).

Regarding Claims 6 and 11 Chediak teaches the armor as claimed except Chediak does not teach that the disks are composed of titanium, titanium alloy or other high tensile ductile metal or alloy. Granqvist teaches a garment for personal protection comprising a ring mesh net (30) that comprises individual rings made out of titanium for the purpose of providing a material that resists penetration (see column 2 lines 45-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the metal disks in the armor of Chediak from titanium as taught by Granqvist for the purpose of providing a material that resists penetration and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding Claim 7 Chediak teaches that the disks (18) can be circular.

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Regarding Claim 8 Chediak teaches that the disks (18) can have polygonal contours.

Regarding Claim 12 Chediak teaches that the fabric is spun from a yarn and that the yarn is made from a high tensile strength fiber that comprises aramid.

Regarding Claim 13 Chediak teaches the layer as claimed except Chediak does not teach that the disks are provided in a density of 10 to 500 per square inch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide disks in the projectile destroying layer of Chediak in a density of 10 to 500 per square inch since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding Claim 14 Chediak teaches the armor as claimed except Chediak does not teach that the fabric has a yarn density for the warp and weft of 5 threads to 100 threads per inch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the fabric in the armor of Chediak with a yarn density for the warp and weft of 5 threads to 100 threads per inch since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding Claim 15 Chediak teaches the armor as claimed except Chediak does not teach that the yarn has a diameter or denier between 19 and 1500 dtex. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the yarn in the armor of Chediak with a denier or diameter between 19 and 1500 dtex since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### ***Double Patenting***

13. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

14. Claims 1, 10 and 18 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 11 and 19 of copending Application No. 10/607,489. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bachner (US 2002/0073473) discloses a multi-component stab and ballistic resistant garment and method comprising a sub-panel comprising a metallic cloth. Honkala (USPT 5,771,488) discloses an impact-resistant protective garment comprising a layer of metal rings threaded by a metal wire. Clausen (USPT 4,292,882) discloses an armor comprising a plurality of loosely related sheets in association with a frontal sheet comprising metal abrading particles. Kuhlmann (USPT 4,507,353) discloses a metal ring fabric for protective clothing. Rast (USPT 6,589,891) discloses an abrasion resistant conformal beaded-matrix for use in safety garments. Ziegler (USPT 5,511,241) discloses chain mail garments impregnated with elastomeric material.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John W. Zerr whose telephone number is (703) 306-0153. The examiner can normally be reached on M-Th. 8:00am-5:30pm, F 8:00am-4:30pm, alt. F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles T. Jordan can be reached on (703) 306-4159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWZ  
3/9/04

*Charles T. Jordan*  
**CHARLES T. JORDAN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**